

2001

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## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: K. Waddington Examiner #: 68082 Date: 6-11-02  
 Art Unit: 1614 Phone Number 308-4650 Serial Number: 0910267807  
 Mail Box and Bldg/Room Location: CM-2A17 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need. *MEJ*

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

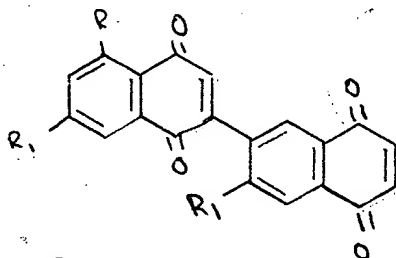
Title of Invention: \_\_\_\_\_

Inventors (please provide full names): Jacobus Johannes marion meyers;Namita Hall

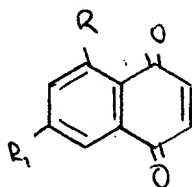
Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Treating tuberculosis with a naphthoquinone derivative of formulae I and II.



Formula I



Formula II

wherein R is an OH group

R1 is a CH3 group

Mary Hale - Supervisor, Info. Branch  
 STIC - Biotech/Chem. Library  
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## Type of Search

NA Sequence (#) \_\_\_\_\_

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Structure (#) 2

Bibliographic \_\_\_\_\_

Litigation \_\_\_\_\_

Fulltext \_\_\_\_\_

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## Vendors and cost where applicable

STN: 354.99

Dialog \_\_\_\_\_

Questel/Orbit \_\_\_\_\_

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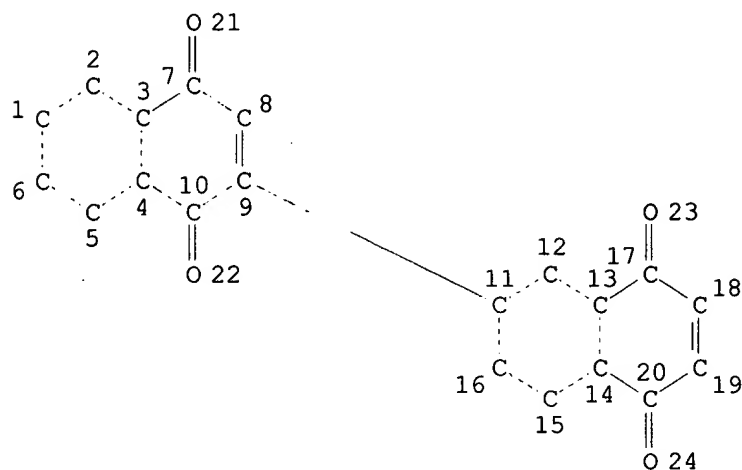
WWW/Internet \_\_\_\_\_

Other (specify) \_\_\_\_\_

Weddington  
926807

=> d 13 que stat;d 16 que stat;fil medl,hcap,biosis,embase,jicst;s (13 or 16) and  
(tb or tuberculos?)

L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE

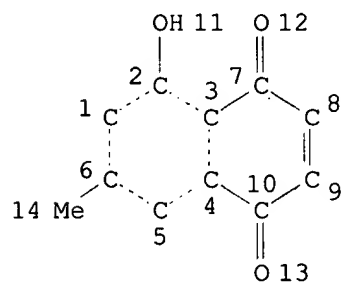
L3 42 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED 261 ITERATIONS

42 ANSWERS

SEARCH TIME: 00.00.01

L4 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L6 298 SEA FILE=REGISTRY SSS FUL L4

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100.0% PROCESSED 5188 ITERATIONS  
SEARCH TIME: 00.00.01

298 ANSWERS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	283.22	283.43

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L7	1 FILE MEDLINE
L8	1 FILE HCAPLUS
L9	1 FILE BIOSIS
L10	1 FILE EMBASE
L11	0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L12 4 (L3 OR L6) AND (TB OR TUBERCULOS?)

=> dup rem l12

PROCESSING COMPLETED FOR L12

L13 2 DUP REM L12 (2 DUPLICATES REMOVED)

=> d cbib abs 1-2;fil hca;e tuberculosis/ct 5

L13 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS

2001:12397 Document No. 134:68700 Naphthoquinone derivatives and their use in the treatment and control of **tuberculosis**. Meyer, Jacobus Johannes Marion; Lall, Namrita (University of Pretoria, S. Afr.). PCT Int. Appl. WO 2001000554 A2 20010104, 22 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 2000-IB837 20000622. PRIORITY: ZA 1999-4176 19990624.

AB Naphthoquinone derivs., or pharmaceutically acceptable salts thereof, are useful for the treatment and/or control of a **tuberculosis** caused by Mycobacterium **tuberculosis** in a patient. The naphthoquinone derivs. are administered orally, i.v., i.m., or transdermally. For example, diospyrin and 7-methyljuglone controlled effectively the

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sensitive and resistant strains of *M. tuberculosis* with min. inhibitory concn. (MIC) of 0.1  $\mu\text{g/mL}$  for diospyrin and 50  $\mu\text{g/mL}$  for 7-methyljuglone, while the MIC for the combination of two drugs was 10  $\mu\text{g/mL}$ .

L13 ANSWER 2 OF 2 MEDLINE DUPLICATE 1  
 2001687564 Document Number: 21551305. PubMed ID: 11694367. Inhibition of drug-sensitive and drug-resistant strains of *Mycobacterium tuberculosis* by diospyrin, isolated from *Euclea natalensis*. Lall N; Meyer J J. (Department of Botany, University of Pretoria, Pretoria 0002, South Africa. ) JOURNAL OF ETHNOPHARMACOLOGY, (2001 Dec) 78 (2-3) 213-6. Journal code: 7903310. ISSN: 0378-8741. Pub. country: Ireland. Language: English.  
 AB The binaphthoquinoid, diospyrin, was isolated from *Euclea natalensis* A.DC., and evaluated for its activity against drug-sensitive and drug-resistant strains of *Mycobacterium tuberculosis*. The minimal inhibitory concentration (MIC) of diospyrin was found to be 100 microg/ml for all the *M. tuberculosis* strains.

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	34.66	318.09
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-0.62	-0.62

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 FILE LAST UPDATED: 6 Jun 2002 (20020606/ED)

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E#	FREQUENCY	AT	TERM
--	-----	--	----
E1	0	2	TUBERCULOID LEPROSY/CT
E2	0	1	TUBERCULOSA/CT
E3	3061	6 -->	TUBERCULOSIS/CT

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E4 0 4 TUBERCULOSIS (L) DIAGNOSIS/CT  
E5 3 2 TUBERCULOSIS DIAGNOSIS/CT

=> e e3+all/ct

E1 9361 BT2 Disease, animal/CT  
E2 19415 BT1 Infection/CT  
E3 3061 --> Tuberculosis/CT

HN Valid heading during volume 66 (1967) to present.  
NOTE Pulmonary tuberculosis is indexed at this heading.  
For studies on tuberculosis of other anatomical  
parts, see those specific headings.

E4 UF Koch's infection/CT  
E5 UF Pulmonary tuberculosis/CT  
E6 2584 RT Tuberculostatics/CT

\*\*\*\*\* END\*\*\*

=> fil medl,hcap,biosis,embase,jicst;s (koch? infection or tuberculos?) and (l3 or l6)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.04	320.13

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.62

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L14 1 FILE MEDLINE  
L15 1 FILE HCAPLUS  
L16 1 FILE BIOSIS  
L17 1 FILE EMBASE  
L18 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L19 4 (KOCH? INFECTION OR TUBERCULOS?) AND (L3 OR L6)

=> s l19 not l12

L20 0 FILE MEDLINE  
L21 0 FILE HCAPLUS  
L22 0 FILE BIOSIS  
L23 0 FILE EMBASE  
L24 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L25 0 L19 NOT L12

Searched by: Mary Hale 308-4258 CM-1 1E01

=> s meyers, j?/au;s lall, n?/au  
L26 305 FILE MEDLINE  
L27 188 FILE HCAPLUS  
L28 397 FILE BIOSIS  
L29 260 FILE EMBASE  
L30 1 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L31 1151 MEYERS, J?/AU

L32 10 FILE MEDLINE  
L33 6 FILE HCAPLUS  
L34 11 FILE BIOSIS  
L35 6 FILE EMBASE  
L36 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L37 33 LALL, N?/AU

=> s l31 and l37

L38 0 FILE MEDLINE  
L39 0 FILE HCAPLUS  
L40 0 FILE BIOSIS  
L41 0 FILE EMBASE  
L42 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L43 0 L31 AND L37

=> s meyer, j?/au and l37

L44 3 FILE MEDLINE  
L45 2 FILE HCAPLUS  
L46 3 FILE BIOSIS  
L47 3 FILE EMBASE  
L48 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L49 11 MEYER, J?/AU AND L37

=> s l49 not l12

L50 2 FILE MEDLINE  
L51 1 FILE HCAPLUS  
L52 2 FILE BIOSIS  
L53 2 FILE EMBASE  
L54 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L55 7 L49 NOT L12

=> dup rem l55

PROCESSING COMPLETED FOR L55

L56 3 DUP REM L55 (4 DUPLICATES REMOVED)

=> d cbib abs 1-3

L56 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2002 ACS

2001:794683 Inhibition of drug-sensitive and drug-resistant strains of  
Mycobacterium tuberculosis by diospyrin, isolated from Euclea natalensis.  
Lall, N.; Meyer, J. J. M. (Department of Botany,  
University of Pretoria, Pretoria, 0002, S. Afr.). J. Ethnopharmacol.,  
78(2-3), 213-216 (English) 2001. CODEN: JOETD7. ISSN: 0378-8741.

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Publisher: Elsevier Science Ireland Ltd..

- AB The binaphthoquinoid, diospyrin, was isolated from *Euclea natalensis* A.DC., and evaluated for its activity against drug-sensitive and drug-resistant strains of *Mycobacterium tuberculosis*. The minimal inhibitory concn. (MIC) of diospyrin was found to be 100 .mu.g/mL for all the *M. tuberculosis* strains.

L56 ANSWER 2 OF 3 MEDLINE DUPLICATE 1  
2001102573 Document Number: 20425198. PubMed ID: 10967488. Antibacterial activity of water and acetone extracts of the roots of *Euclea natalensis*. **Lall N; Meyer J J.** (Department of Botany, University of Pretoria, Pretoria 0002, South Africa. ) JOURNAL OF ETHNOPHARMACOLOGY, (2000 Sep) 72 (1-2) 313-6. Journal code: 7903310. ISSN: 0378-8741. Pub. country: Ireland. Language: English.

- AB Water and acetone extracts of the roots of *Euclea natalensis* A.DC. were investigated for their in vitro antibacterial properties. The Gram-positive bacteria tested appeared to be more susceptible to the extracts than the Gram-negative bacteria. The water and acetone extracts inhibited the growth of *Bacillus cereus*, *Bacillus pumilus*, *Bacillus subtilis*, *Micrococcus kristinae* and *Staphylococcus aureus* at concentrations ranging between 0.1 and 6.0 mg/ml. The water extract did not exert any inhibitory action on Gram-negative bacteria while the acetone extract showed inhibitory activity at a concentration of 5.0 mg/ml against all the Gram-negative bacteria investigated. The antibacterial activity of acetone extract was also investigated by a direct bioassay on TLC plates against *S. aureus*.

L56 ANSWER 3 OF 3 MEDLINE DUPLICATE 2  
1999400163 Document Number: 99400163. PubMed ID: 10473184. In vitro inhibition of drug-resistant and drug-sensitive strains of *Mycobacterium tuberculosis* by ethnobotanically selected South African plants. **Lall N; Meyer J J.** (Department of Botany, University of Pretoria, South Africa. ) JOURNAL OF ETHNOPHARMACOLOGY, (1999 Sep) 66 (3) 347-54. Journal code: 7903310. ISSN: 0378-8741. Pub. country: Ireland. Language: English.

- AB Twenty South African medicinal plants used to treat pulmonary diseases were screened for activity against drug-resistant and drug-sensitive strains of *Mycobacterium tuberculosis*. A preliminary screening of acetone and water plant extracts against a drug-sensitive strain of *Mycobacterium tuberculosis*, H37Rv, was done by the agar plate method. Fourteen of the 20 acetone extracts showed inhibitory activity at a concentration of 0.5 mg/ml against this strain. Acetone as well as water extracts of *Cryptocarya latifolia*, *Euclea natalensis*, *Helichrysum melanacme*, *Nidorella anomala* and *Thymus vulgaris* inhibited the growth of *M. tuberculosis*. Given the activity of 14 acetone extracts at 0.5 mg/ml against the drug-sensitive strain by the agar plate method, a further study was done employing a rapid radiometric method to confirm the inhibitory activity. These active acetone extracts were screened against the H37Rv strain as well as a strain resistant to the drugs isoniazid and rifampin. The minimal inhibitory concentration of *Croton pseudopulchellus*, *Ekebergia capensis*, *Euclea natalensis*, *Nidorella anomala* and *Polygala myrtifolia* was 0.1 mg/ml against the H37Rv strain by the radiometric method. Extracts of *Chenopodium ambrosioides*, *Ekebergia capensis*, *Euclea natalensis*, *Helichrysum melanacme*, *Nidorella anomala* and *Polygala myrtifolia* were active against the resistant strain at 0.1 mg/ml. Eight plants showed activity against both strains at a concentration of 1.0 mg/ml.

=> del his y

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

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